

Subpart K—Technical Standards

§ 76.601 Performance tests.

(a) The operator of each cable television system shall be responsible for insuring that each such system is designed, installed, and operated in a manner that fully complies with the provisions of this subpart.

(b) The operator of each cable television system shall conduct complete performance tests of that system at least twice each calendar year (at intervals not to exceed seven months), unless otherwise noted below. The performance tests shall be directed at determining the extent to which the system complies with all the technical standards set forth in § 76.605(a) and shall be as follows:

(1) For cable television systems with 1000 or more subscribers but with 12,500 or fewer subscribers, proof-of-performance tests conducted pursuant to this section shall include measurements taken at six (6) widely separated points. However, within each cable system, one additional test point shall be added for every additional 12,500 subscribers or fraction thereof (*e.g.*, 7 test points if 12,501 to 25,000 subscribers; 8 test points if 25,001 to 37,500 subscribers, *etc.*). In addition, for technically integrated portions of cable systems that are not mechanically continuous (*i.e.*, employing microwave connections), at least one test point will be required for each portion of the cable system served by a technically integrated microwave hub. The proof-of-performance test points chosen shall be balanced to represent all geographic areas served by the cable system. At least one-third of the test points shall be representative of subscriber terminals most distant from the system input and from each microwave receiver (if microwave transmissions are employed), in terms of cable length. The measurements may be taken at convenient monitoring points in the cable network: Provided, that data shall be included to relate the measured performance of the system as would be viewed from a nearby subscriber terminal. An identification of the instruments, including the makes, model numbers, and the most recent date of calibration, a description of the

procedures utilized, and a statement of the qualifications of the person performing the tests shall also be included.

(2) Proof-of-performance tests to determine the extent to which a cable television system complies with the standards set forth in § 76.605(a) (3), (4), and (5) shall be made on each of the NTSC or similar video channels of that system. Unless otherwise as noted, proof-of-performance tests for all other standards in § 76.605(a) shall be made on a minimum of four (4) channels plus one additional channel for every 100 MHz, or fraction thereof, of cable distribution system upper frequency limit (*e.g.*, 5 channels for cable television systems with a cable distribution system upper frequency limit of 101 to 216 MHz; 6 channels for cable television systems with a cable distribution system upper frequency limit of 217–300 MHz; 7 channels for cable television systems with a cable distribution upper frequency limit to 300 to 400 MHz, *etc.*). The channels selected for testing must be representative of all the channels within the cable television system.

(3) The operator of each cable television system shall conduct semi-annual proof-of-performance tests of that system, to determine the extent to which the system complies with the technical standards set forth in § 76.605(a)(4) as follows. The visual signal level on each channel shall be measured and recorded, along with the date and time of the measurement, once every six hours (at intervals of not less than five hours or no more than seven hours after the previous measurement), to include the warmest and the coldest times, during a 24-hour period in January or February and in July or August.

(4) The operator of each cable television system shall conduct triennial proof-of-performance tests of its system to determine the extent to which the system complies with the technical standards set forth in § 76.605(a)(11).

(c) Successful completion of the performance tests required by paragraph (b) of this section does not relieve the system of the obligation to comply with all pertinent technical standards at all subscriber terminals. Additional tests, repeat tests, or tests involving

specified subscriber terminals may be required by the Commission or the local franchiser to secure compliance with the technical standards.

(d) The provisions of paragraphs (b) and (c) of this section shall not apply to any cable television system having fewer than 1,000 subscribers: *Provided, however,* that any cable television system using any frequency spectrum other than that allocated to over-the-air television and FM broadcasting (as described in §§ 73.603 and 73.210 of this chapter) is required to conduct all tests, measurements and monitoring of signal leakage that are required by this subpart. A cable television system operator complying with the monitoring, logging and the leakage repair requirements of § 76.614, shall be considered to have met the requirements of this paragraph. However, the leakage log shall be retained for five years rather than the two years prescribed in § 76.1706.

NOTE 1 TO § 76.601: Prior to requiring any additional testing pursuant to § 76.601(c), the local franchising authority shall notify the cable operator who will be allowed thirty days to come into compliance with any perceived signal quality problems which need to be corrected. The Commission may request cable operators to test their systems at any time.

NOTE 2 TO § 76.601: Section 76.1717 contains recordkeeping requirements for each system operator in order to show compliance with the technical rules of this subpart.

NOTE 3 TO § 76.601: Section 76.1704 contains recordkeeping requirements for proof of performance tests.

[65 FR 53615, Sept. 5, 2000]

EFFECTIVE DATE NOTE: At 65 FR 53616, Sept. 5, 2000, § 76.601 was revised, effective Oct. 5, 2000. For the convenience of the user, the superseded text is set forth as follows:

§ 76.601 Performance tests.

(a) The operator of each cable television system shall be responsible for insuring that each such system is designed, installed, and operated in a manner that fully complies with the provisions of this subpart. Each system operator shall be prepared to show, on request by an authorized representative of the Commission or the local franchiser, that the system does, in fact, comply with the rules.

(b) The operator of each cable television system shall maintain at its local office a current listing of the cable television chan-

nels which that system delivers to its subscribers.

(c) The operator of each cable television system shall conduct complete performance tests of that system at least twice each calendar year (at intervals not to exceed seven months), unless otherwise noted below, and shall maintain the resulting test data on file at the operator's local business office for at least five (5) years. The test data shall be made available for inspection by the Commission or the local franchiser, upon request. The performance tests shall be directed at determining the extent to which the system complies with all the technical standards set forth in § 76.605(a) and shall be as follows:

(1) For cable television systems with 1000 or more subscribers but with 12,500 or fewer subscribers, proof-of-performance tests conducted pursuant to this section shall include measurements taken at six (6) widely separated points. However, within each cable system, one additional test point shall be added for every additional 12,500 subscribers or fraction thereof (*e.g.*, 7 test points if 12,501 to 25,000 subscribers; 8 test points if 25,001 to 37,500 subscribers, *etc.*). In addition, for technically integrated portions of cable systems that are not mechanically continuous (*i.e.*, employing microwave connections), at least one test point will be required for each portion of the cable system served by a technically integrated microwave hub. The proof-of-performance test points chosen shall be balanced to represent all geographic areas served by the cable system. At least one-third of the test points shall be representative of subscriber terminals most distant from the system input and from each microwave receiver (if microwave transmissions are employed), in terms of cable length. The measurements may be taken at convenient monitoring points in the cable network: *Provided*, that data shall be included to relate the measured performance of the system as would be viewed from a nearby subscriber terminal. An identification of the instruments, including the makes, model numbers, and the most recent date of calibration, a description of the procedures utilized, and a statement of the qualifications of the person performing the tests shall also be included.

(2) Proof-of-performance tests to determine the extent to which a cable television system complies with the standards set forth in § 76.605(a) (3), (4), and (5) shall be made on each of the NTSC or similar video channels of that system. Unless otherwise as noted, proof-of-performance tests for all other standards in § 76.605(a) shall be made on a minimum of four (4) channels plus one additional channel for every 100 MHz, or fraction thereof, of cable distribution system upper frequency limit (*e.g.*, 5 channels for cable television systems with a cable distribution system upper frequency limit of 101 to 216 MHz; 6 channels for cable television systems

with a cable distribution system upper frequency limit of 217–300 MHz; 7 channels for cable television systems with a cable distribution upper frequency limit to 300 to 400 MHz, *etc.*). The channels selected for testing must be representative of all the channels within the cable television system.

(3) The operator of each cable television system shall conduct semi-annual proof-of-performance tests of that system, to determine the extent to which the system complies with the technical standards set forth in § 76.605(a)(4) as follows. The visual signal level on each channel shall be measured and recorded, along with the date and time of the measurement, once every six hours (at intervals of not less than five hours or no more than seven hours after the previous measurement), to include the warmest and the coldest times, during a 24-hour period in January or February and in July or August.

(4) The operator of each cable television system shall conduct triennial proof-of-performance tests of its system to determine the extent to which the system complies with the technical standards set forth in § 76.605(a)(11).

(d) Successful completion of the performance tests required by paragraph (c) of this section does not relieve the system of the obligation to comply with all pertinent technical standards at all subscriber terminals. Additional tests, repeat tests, or tests involving specified subscriber terminals may be required by the Commission of the local franchiser to secure compliance with the technical standards.

(e) The provisions of paragraphs (c) and (d) of this section shall not apply to any cable television system having fewer than 1,000 subscribers: Provided, however, that any cable television system using any frequency spectrum other than that allocated to over-the-air television and FM broadcasting (as described in § 73.603 and § 73.210 of this chapter) is required to conduct all tests, measurements and monitoring of signal leakage that are required by this subpart. A cable television system operator complying with the monitoring, logging and the leakage repair requirements of § 76.614, shall be considered to have met the requirements of this paragraph. However, the leakage log, shall be retained for five years rather than the two years prescribed in § 76.614.

NOTE: Prior to requiring any additional testing pursuant to § 76.601(d), the local franchising authority shall notify the cable operator who will be allowed thirty days to come into compliance with any perceived signal quality problems which need to be corrected. The Commission may request cable operators to test their systems at any time.

[57 FR 11001, Apr. 1, 1992, as amended at 57 FR 61010, Dec. 23, 1992]

§ 76.605 Technical standards.

(a) As of December 30, 1992, unless otherwise noted, the following requirements apply to the performance of a cable television system as measured at any subscriber terminal with a matched impedance at the termination point or at the output of the modulating or processing equipment (generally the headend) of the cable television system or otherwise as noted. The requirements are applicable to each NTSC or similar video downstream cable television channel in the system:

(1)(i) The cable television channels delivered to the subscriber's terminal shall be capable of being received and displayed by TV broadcast receivers used for off-the-air reception of TV broadcast signals, as authorized under part 73 of this chapter; and

(ii) Cable television systems shall transmit signals to subscriber premises equipment on frequencies in accordance with the channel allocation plan set forth in the Electronics Industries Association's "Cable Television Channel Identification Plan, EIA IS-132, May 1994" (EIA IS-132). This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 522(a) and 1 CFR Part 51. Cable systems are required to use this channel allocation plan for signals transmitted in the frequency range 54 MHz to 1002 MHz. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 522(a) and 1 CFR Part 51. Copies of EIA IS-132 may be obtained from: Global Engineering Documents, 2805 McGraw Ave., Irvine CA 92714. Copies of EIA IS-132 may be inspected during normal business hours at the following locations: Federal Communications Commission, 1919 M Street, NW, Dockets Branch (Room 239), Washington, DC, or the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC. This requirement is applicable on May 31, 1995, for new and re-built cable systems, and on June 30, 1997, for all cable systems.

(2) The aural center frequency of the aural carrier must be 4.5 MHz \pm 5 kHz above the frequency of the visual carrier at the output of the modulating or